EDUCATIONAL TELEVISION

SUMMARY OF SUPPLEMENTAL FIELD HEARINGS

THE UNIVERSITY OF MICHIGAN
MAR 9 1960
MAIN READING ROOM

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE HOUSE OF REPRESENTATIVES

EIGHTY-SIXTH CONGRESS

FIRST SESSION

ON

H.R. 32

A BILL TO AMEND THE COMMUNICATIONS ACT OF 1934 TO ASSIST IN THE ESTABLISHMENT AND IMPROVEMENT OF CERTAIN TELEVISION BROADCASTING FACILITIES

H.R. 1981, H.R. 3723, H.R. 4248, H.R. 4572

BILLS TO EXPEDITE THE UTILIZATION OF TELEVISION FACILITIES IN OUR PUBLIC SCHOOLS AND COLLEGES, AND IN ADULT TRAINING PROGRAMS

H.R. 2926, H.R. 3043

BILLS TO AMEND THE COMMUNICATIONS ACT OF 1934 TO ESTABLISH A PROGRAM OF FEDERAL MATCHING GRANTS FOR THE CONSTRUCTION OF TELEVISION FACILITIES TO BE USED FOR EDUCATIONAL PURPOSES

S. 12

AN ACT TO EXPEDITE THE UTILIZATION OF TELEVISION TRANSMISSION FACILITIES IN OUR PUBLIC SCHOOLS AND COLLEGES, AND IN ADULT TRAINING PROGRAMS

NOVEMBER 3, 12, 14, 16, DECEMBER 1, 3, 4, 7, AND 8, 1959

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EDUCATIONAL TELEVISION

SUMMARY OF FIELD STUDY

The Subcommittee on Communications and Power held hearings on May 12, and 13, 1959 on seven House bills [1] and one Senate bill [2] providing for programs of Federal grants for the construction of educational-television stations.

On June 3, 1959, the subcommittee met in executive session and voted to defer action on these bills until a field study of the entire subject was completed by the subcommittee.

In carrying out this decision field hearings were held following the adjournment of the 1st session of the 86th Congress at the following places: Topeka, Kans; San Francisco, Calif.; Seattle, Wash; Denver, Colo.; Raleigh, N.C.; Atlanta, Ga.; Birmingham, Ala.; New Orleans, La.; and Tampa and Miami, Fla.

The hearings were conducted by the following members: in Topeka, by Representatives Brock (Democrat of Nebraska) and Avery (Republican of Kansas); in San Francisco, by Representatives Moss (Democrat of California) and Avery; in Seattle by Representatives Brock and Avery; in Denver by Representatives Flynt (Democrat of Georgia), Brock, and Avery; in Raleigh by Representatives Roberts (Democrat of Alabama), Rostenkowski (Democrat of Illinois) and Collier (Republican of Illinois); in Atlanta by Representatives Flynt, Roberts, Rostenkowski, and Collier; in Birmingham by Representatives Roberts, Rostenkowski, and Collier; in New Orleans by Representatives Roberts, Rostenkowski and Collier; in Tampa by Representatives Rostenkowski and Collier; and in Miami by Representatives Rostenkowski, Bennett (Republican of Michigan) and Collier.

At the Denver hearing the subcommittee was joined by Representative Rogers (Democrat of Colorado); at the Birmingham hearing by Representative Huddleston (Democrat of Alabama); at the New Orleans hearing by Representatives Boggs (Democrat of Louisiana) and Hébert (Democrat of Louisiana), and at the Tampa-St. Petersburg hearings by Representative Cramer (Republican of Florida). The subcommittee desires to express its appreciation to these Members of Congress who are not members of the Committee on Interstate and Foreign Commerce for their interest in attending these hearings.

I. Diversity of State and Local Patterns of ETV

In the course of the field study the subcommittee had occasion to observe at firsthand a number of different State and local patterns adopted in the planning, organization, and operation of ETV. This diversity appears to be an element of strength rather than of weak-

[1] H.R. 32 (Boggs), H.R. 1981 (Udall), H.R. 2926 (Roberts), H.R. 3043 (Moulder), H.R. 3723 (Foley), H.R. 4284 (McDowell), H.R. 4872 (Bentley).
[2] S. 12 (Magnuson and Schoeppel).

ness. It reflects in a very real way the differences in needs which ETV is designed to meet in various States and communities; differences in the sources of leadership which has assumed responsibility for planning, organizing, and operating ETV; differences in sources of financial support for construction and operation of ETV facilities; differences in population distribution as between urban centers and rural areas; differences as to size, affluence, enterprise and traditions of the urban centers involved; and differences in their relationships to their respective State governments.

For example, station KQED, San Francisco, Calif., is a community station, operated by a nonprofit corporation representing a number of educational, business, and civic interests of the community. Its principal sources of operating funds are voluntary memberships of viewers and donations of interested corporations and philanthropies. Schools participating in ETV programs prepared for in-classroom use pay a per capita fee. Construction funds were contributed by various foundations and organizations, including commercial broadcasters. No public funds, State or local, were involved.

The station management believes that, in the interest of an effective and challenging service, community station operation such as that of KQED, is preferable to operation by a State government or local school system. The station does not want any State interference with its operations. On the other hand, the general manager of the station who is also chairman of the Governor's advisory committee on ETV concedes that it may not be possible to duplicate the San Francisco operational pattern in general throughout the country or even throughout the State.

The San Francisco pattern is repeated substantially in Sacramento, Calif. (station KVIE) and in New Orleans, La. (station WYES).

At the other end of the spectrum are the three Alabama stations (station WBIQ, Birmingham; station WCIQ, Munford; and station WAIQ, Andalusia) which form a statewide network interconnected by microwave serving 80 percent of the State's population. Construction as well as operating funds are appropriated by the Alabama State legislature, and the stations are licensed to and operated by the Alabama Educational Television Commission established in 1953 by State statute. Programs include classroom programs for elementary schools, high schools and colleges, as well as children and adult educational programs for home viewing.

An intermediate pattern may be found in North Carolina where station WUNC is licensed to the consolidated University of North Carolina (with studios at each of the three component institutions) and the State legislature appropriates operating funds for the station while construction funds were contributed largely by private organizations and business firms.

A different intermediate pattern again may be found in Florida, where the State has created an educational television commission and the State legislature has appropriated construction funds. Some of the stations are licensed to community nonprofit corporations (WJCT, Jacksonville; and WEDU, Tampa and St. Petersburg). One station is licensed to the University of Florida (WUFT, Gainesville) and another to the Board of Public Instruction of Dade County (WTHS, Miami).

In Georgia, one station is licensed to and financed by the Board of Education of the City of Atlanta and another to the University System of Georgia (WGTV, Athens) but no statutory State ETV commission is in existence.

In Washington, station KCTS is owned and operated by the University of Washington. Construction funds came from public as well as private sources. Operating funds come from the university, the public library, and school districts served by the station. Washington's second station (KPEC, Tacoma) is to be licensed to the Clover Park School District No. 400 of Pierce County.

In Oregon, station KOAC at Corvallis is licensed to the Oregon State Board of Higher Education, while in Colorado, station KRMA in Denver is operated by the Denver public schools and financed partially out of public funds and partly out of private contributions.

In Kansas, where no ETV station is on the air as yet, a great deal of planning is undertaken in the State legislature, the State university system, as well as by a citizens committee.

II. Uses and Advantages of ETV

Every effort was made by the subcommittee to give adequate advance notice by radio, television, press, and in other ways of the field hearings to be conducted in the several communities in order to give all persons interested in ETV an opportunity to testify on (1) the role of ETV; (2) the need for ETV; and (3) the respective roles which Federal, State, and local governments, and private groups and organizations should play in connection with ETV.

The overwhelming majority of the witnesses expressed themselves in favor of ETV as presently used and of expanded use of ETV although some of the witnesses warned against adoption of any kind of crash program which would fail to secure an adequate foundation of local community understanding, planning, and support which was absolutely needed to make ETV a success.

The arguments advanced by the witnesses in favor of ETV and its expanded use may be summarized as follows:

(*1*) *ETV can equalize educational opportunities*

One of the principal arguments which was advanced in favor of ETV and its expanded use is the opportunity which ETV offers to equalize educational opportunities as between areas with scattered populations, often poor financial resources and with inadequate, small schools, and urban areas with better financial resources and more adequate, larger schools.

Examples were cited repeatedly of the great benefits which had come to numerous small schools, and particularly small high schools, in areas with scattered population from ETV courses in physics, chemistry, mathematics, and foreign languages where previously these schools had never been able to give adequate courses in these subjects.

It was pointed out that many of the present ETV stations are located in areas with greater population concentration and these stations therefore benefit primarily schools which have already facilities and personnel superior to the smaller schools located in less populous areas. Proper planning with respect to future expansion of ETV therefore, it was argued, should result in benefiting particularly the less populous areas where the benefits of ETV would be felt most.

(2) ETV can make better use of scarce and superior teaching skills

Another argument advanced frequently was to the effect that through the use of ETV, high caliber, scarce teaching skills of teachers of physics, chemistry, mathematics, technical drawing, foreign languages, art and music, to name only a few subjects, can be made available to many times more students than is the case when conventional classroom teaching methods are employed. As a matter of fact, it was stated that in the absence of ETV, courses in certain subjects like Spanish, Russian, German, music, advanced mathematics or physics could not be included in school curriculums because teachers in sufficient numbers to teach these subjects through conventional class-room methods are simply not available.

Furthermore, it was pointed out that the number of students who seek instruction in highly technical subjects like advanced mathematics, physics, and chemistry is increasing constantly while the number of teachers who are qualified to teach these subjects is going down because government and industrial research and manufacturing organizations are in a position to compete successfully for their services by offering much higher salaries.

(3) ETV instruction superior to conventional instruction in certain respects

Several witnesses made the point that instruction by ETV was superior to conventional methods of classroom instruction in a number of respects:

First, experiments and demonstrations in science classes involving objects of small size can be shown better by ETV than by conducting the experiment or demonstration in classrooms;

Secondly, teachers of science using TV have time to prepare experiments and demonstrations ahead of time, and thus preparation of scientific experiments and demonstrations does not consume valuable classroom time;

Third, demonstrations and experiments which have to be viewed from above, as for example, demonstrations involving microscopes, can be shown more easily on TV.

Fourth, comparative experiments can be shown on a split TV screen while such experiments are difficult if not impossible to perform in a classroom;

Fifth, the TV picture of experiments is often much brighter, thus affording better visibility than the actual experiments;

Sixth, TV teachers can prepare better for TV lessons because they are relieved of most if not all of their classroom teaching loads.

Seventh, television, and particularly color television, used in instructing medical and dental students is superior to classroom instruction because a better view may be had of close work, and more students can be taught than by traditional methods of instruction.

The statement was made that had TV been available 30 years ago, colleges would probably have refrained from developing survey courses given by lecturing to large numbers of students in large lecture rooms, and several TV sets would have been used instead in regular size classrooms because of the advantage that the students are actually seated closer to TV sets than they are now to the lecturer in large lecture rooms.

(4) *Can use of ETV lower the cost of education?*

Testimony with respect to savings which might result from use of ETV in schools and colleges ranged from hopeful speculations that such use might act as a brake on the spiraling cost of education, to specific statements that use of ETV had saved $3 million in capital outlay for additional classrooms which would otherwise have been required to teach increased numbers of students in public schools. However, even those witnesses who testified as to specific savings emphasized that ETV should not be "sold" on the basis of possible savings but rather on the basis of making possible better education.

The testimony with respect to $3 million actual savings in capital outlay for classrooms and potentially greater savings during the next 5 years amounting to $12 million was received in Miami. The following is an excerpt from the summary prepared at the request of the subcommittee by Mr. Joe Hall, superintendent of the Dade County Public Schools: [3]

> By using the large groups (300–400 students) involved in the television program and the extended school day, we are able to accommodate 30 percent more pupils in a building than we can otherwise handle. It works in this manner: Approximately one-third of the pupils report to school at 7:30 a.m., another one-third at 8:30 a.m. and another one-third at 9:30 a.m. They leave school at 2:15, 3:15, and 4:15 p.m. This means that for four periods during the middle of the day, the entire group of students is present in the building. In this period, by utilizing our school auditoriums for the large groups, we are able to accommodate a much greater number of pupils within the same facility. With the program we now have involving only a limited number of our schools, we feel that we have saved at least $3 million in capital construction. To provide for the number of pupils in the established pattern for education that we now have in our buildings would require an immediate capital outlay program of at least $3 million. We believe as we involve other schools that the amount of capital savings will be increased far beyond this point.
>
> * * * * *
>
> * * * we will have in that period [of the next 3 to 5 years] a need for three additional high school buildings costing approximately $2 million each. You will note that our final recommendation states that by utilizing the extended school day and educational television large class instruction during the overlapped periods, we feel we will not need to construct any additional senior high schools during that period. The savings in senior high schools, therefore, including present needs and those for the next 3 to 5 years, is $6 million.
>
> * * * * *
>
> We have not made a similar detailed analysis of our junior high schools for the next 3 to 5 years. We do know,

[3] The summaries prepared at the request of the subcommittee by Mr. Vernon Bronson, assistant director of radio and television education, and Mr. Joe Hall, superintendent, Dade County Public Schools, are printed in the appendix.

> however, that if we were not utilizing the facilities in accordance with the plan sent to you in the previous letter, we would now need three additional junior high schools at an approximate cost of $1,200,000 each. * * *
>
> * * * * *
>
> * * * if one were starting a construction program in a newly established population area where no schools are in existence, then the number of elementary classrooms needed could be reduced by 10 percent with the educational television program which we now operate. The number of junior high schools and the number of senior high school classrooms could be reduced by one-fourth.
>
> In a practical situation, where school buildings already exist, the savings can be made only as the population increase in a particular area makes it possible and desirable. We do anticipate from our present rate of growth that the savings in capital construction over the next 5-year period will amount to about $12 million.

Other witnesses suggested that ETV not only pays its own way, but that savings resulting from the use of ETV can be used to (1) increase teachers' salaries, (2) improve education by making possible hiring of specialized teachers, as for example, for remedial reading, speech, etc.

It was also pointed out that the use of ETV made possible savings in expensive laboratory equipment and demonstration models used in teaching science courses.

On the college level, savings in classrooms and instructors were achieved by teaching three first-year college courses for credit on ETV to be received by students at their homes during the summer following their graduation from high school. Students taking these courses, would come to the campus only at the beginning and the end of the course to register and take their examinations.

Finally, it was suggested that even if no savings should result from the use of ETV, still the same money would buy a better education by permitting the best teachers to reach a larger student body.

(5) *Acceptance of ETV in classrooms*

It was testified that it had been the experience in the various communities in which ETV had been used in classrooms that after an initial period of scepticism ETV had been generally accepted by teachers and students, and that the TV teacher was generally looked upon as another member of the classroom.

However, there were expressions of opinion by individual students in the classes visited and by others that ETV in contrast to traditional methods of instruction, does not permit student participation and destroys the personal relationship between teacher and student. The answer given to this objection in the words of Superintendent Hall of Miami was as follows:

> Our answer to this is that for five periods during the day, or five-sixth's of the pupil's time, we maintain the regular established pattern for classroom size. In addition, we feel there are certain other values derived from the large group situation. It requires the pupil to assume greater respon-

sibility for his own conduct. It requires that the pupil pay strictest attention and make his notes as the presentation is made. We have also developed techniques for handling large groups and retaining many of the values which are derived from the small class size.

The subcommittee inquired repeatedly whether teacher groups objected to ETV because of apprehension of replacement of classroom teachers by ETV. The answer was uniformly that there was no such fear; that ETV, properly used, supplemented rather than replaced classroom teaching; and that there was an ever-increasing demand for more teachers to meet the increasing enrollment of students.

Testimony was given repeatedly to the effect that comparative tests given to ETV students and regular students of the same subject demonstrated that ETV instruction was equal if not superior in effectiveness to classroom instruction.

It was pointed out that new educational methods are generally slow in gaining acceptance and that it had taken a generation before movie projectors had become accepted as an effective medium of education. The hope was expressed that it would not take a whole generation before ETV was accepted as an effective educational medium.

(6) *Uses of ETV outside of classroom*

Testimony was received in the course of the field hearings on various uses which are being made of ETV outside of the classrooms. These uses include, among others—

(1) Teaching of handicapped and sick children in hospitals and at home;

(2) Summer makeup classes and refresher classes for high-school graduates who failed or who were weak in courses required for college entrance (this makes possible entry in college in the fall and avoids loss of a whole year);

(3) In-service training of teachers during evening making unnecessary costly attendance at colleges away from home during summer vacations;

(4) Family counseling;

(5) Agricultural extension courses, including information on better marketing methods for farm produce, thus increasing farmers' income;

(6) Adult education in general;

(7) Training of adults for new industries;

(8) Courses in extracurricular subjects aimed at elementary and high-school students to be viewed during evening hours.

(7) *Collateral effects of ETV*

Testimony was received to the effect that the planning and operation of ETV, especially when such planning and operation is undertaken on the local level, stimulates interest not only in ETV but in education generally. This was stated to be particularly the case where stations are operated by nonprofit corporations organized by interested groups and individuals but also in the case of stations operated by local school districts where advisory councils have been established to assist in the planning and operation of the stations. In these cases, groups and individuals who are not professional edu-

cators are said to be drawn into the planning and operation of educational television programing with the result that they have to come face to face with such problems as what is an educational program as distinguished from a political program, and how should controversial issues be dealt with on ETV stations: should they be avoided or dealt with in an impartial manner.

Another collateral effect of ETV is that it offers an opportunity for parents to watch the television programs viewed by their children in school with the result that parents and children are enabled to discuss with each other what was seen by both on ETV.

III. Division of Responsibility for ETV

A considerable amount of testimony was received on the question of the respective roles which the Federal Government, State governments, local governments, and listeners and private organizations should play in organizing, financing, and operating ETV, and the relationship between ETV and commercial TV.

(1) *Responsibility of Federal Government*

The witnesses unanimously expressed the view that the Federal Government should continue to hold for extended periods of time, if not indefinitely, the television channels now reserved for nonprofit educational television. Some of the witnesses pointed out that present reservations are based on Commission action rather than specific statutory authority; that the reservations, therefore are insecure and subject to wholesale or individual challenge; that UHF allocations instead of VHF allocations are inadequate; and that consideration should be given by the Congress to an appropriate amendment of the Communications Act to provide for adequate and permanent reservations. Fear was expressed repeatedly that in the absence of a policy of permanent reservations, some or many of the channels now set aside for ETV might be irretrievably lost to education.

Beyond the question of allocations, the views expressed by different witnesses with respect to the proper role of the Federal Government in regard to ETV differed sharply. A few witnesses opposed any Federal financial assistance; on the other hand a few others wanted Federal aid for operation as well as construction of ETV stations; most of the witnesses sought a long-term program of construction aid but wanted no operational aid and some of these witnesses advocated a "one shot" program of construction aid not as a matter of principle but as a matter of expediency or last resort.

In addition, some witnesses favored a continuing Federal program of research grants to determine best ETV teaching methods and to select subjects which can best be taught by ETV.

Witnesses advocating Federal financial aid pointed to numerous Federal grant-in-aid programs and research-grant programs not only in the field of education but in agriculture, transportation, health, welfare, etc. It was argued that these programs had the effect of stimulating State and local government expenditures and private contributions considerably in excess of the amounts contributed by the Federal Government.

Some witnesses expressed the view that any program of Federal aid for ETV which might be forthcoming should not be considered as justifying curtailment of Federal aid for classroom construction.

It was stated that a Federal loan program in lieu of a grant program would not be helpful in view of constitutional and statutory ceilings on indebtedness which may be incurred by communities or school districts.

There was uniformly expressed opposition to Federal control of ETV operations, and some witnesses felt there was need to provide in any Federal ETV legislation a guarantee (if necessary by criminal prohibition) against ETV stations being used for political purposes by any elected or appointed State or local official or any candidate for any State or local office.

(2) Responsibility of State governments

With respect to the responsibility of State governments in relation to ETV widely differing views were expressed. Some of the witnesses, particularly in those States where State governments have assumed leadership in this field, expressed the view that since education of all people in the States was involved, funds for the operation of ETV should come out of State appropriations. Other witnesses, fearing State control of ETV operations, wanted financing of ETV exclusively on a local basis, shunning even support from private national foundations.

Several witnesses stressed that the decision as to which courses should be taught by ETV and which by traditional methods should be left to local school authorities just as schoolbooks are selected on the local level.

Other witnesses felt that in areas with widely scattered populations, State funds would be required to make ETV operations possible.

(3) Responsibility of local governments

The view was expressed repeatedly that ETV operations should be financed locally in order to assure local responsibility for and control of such operations. In order to assure the willingness on the part of lodal citizens to carry the continuing financial burden of operating ETV stations, several witnesses suggested that any Federal ETV construction grant legislation should require local matching in order to bring home to the local communities the financial responsibilities which acceptance of a Federal construction grant would entail for the operation of an ETV station.[4]

(4) Responsibility of listeners and private groups

In those communities in which ETV stations are operated by a private nonprofit corporation representative of groups interested in education and public affairs, witnesses expressed the view that ETV programing can be most effective by having listeners and interested private organizations share in the operational expense of the community stations. The witnesses felt that there was a vital link between having listeners make financial contributions to ETV programing and their having a close interest in ETV programing, and particularly afternoon and evening ETV programing of an effective and far-reaching character.

(5) Responsibility of and relationship with commercial broadcasters

The responsibility of commercial stations for educational programing and the relationship between ETV and commercial TV was a subject on which the subcommittee received much testimony.

[4] See below for additional testimony on outright versus matching grants.

The commercial broadcasters who appeared before the subcommittee generally expressed themselves in favor of ETV on the ground that commercial stations are not in a position to make available enough time for educational broadcasts.

In a number of communities, commercial stations are presently carrying a limited number of ETV school programs as a public service. However, the stations feel they cannot afford economically to give more free time. Also, commercial programs following educational programs were stated to suffer from low ratings because of the smaller audience which generally views the preceding educational programs. Therefore, the commercial broadcasters appearing before the subcommittee were opposed to any plan involving time-sharing arrangements.

Little or no fear was expressed by commercial broadcasters that ETV might substantially cut into their audience. On the other hand a number of witnesses concerned with inadequate commercial programing expressed the hope that effective ETV programing might tend to create a demand on the part of the viewing public for more and better commercial programing outside of the field of pure entertainment.

The important but limited role which commercial television has played and can play with respect to educational programing was described by Prof. Harvey E. White of the University of California (Berkeley) who taught a college physics course known as "Continental Classroom" over a commercial network. This course was financed by the Ford Foundation and a number of business corporations. The course which was taught from 6:30 a.m. to 7 a.m. had an estimated 400,000 regular viewers. Among these were 5,000 students who took the course for academic credit at 270 cooperating colleges and universities. The course was designed primarily to give high school teachers a better grounding in modern physics. A second "Continental Classroom" course in college chemistry taught by Prof. John F. Baxter of the University of Florida is being broadcast over the same network.

In a number of communities it was testified that a close cooperative relationship exists between commercial stations and ETV stations. In some instances, commercial stations made valuable gifts of towers and equipment to aid in the establishment of ETV stations. In other instances, commercial stations have lent mobile and other equipment to assist ETV stations in their operations.

A good example of operational cooperation was given in Raleigh, N.C. Several commercial radio stations in North Carolina are carrying sponsored college basketball programs. The ETV station wanted to televise these games, and it was agreed that the games would be televised without sound so that viewers could watch the picture over ETV and listen simultaneously to descriptions of the games on their radio. A new word was created to describe this penomenon: "Broadvision."

Another way in which commercial stations might aid ETV was suggested by a commercial broadcaster. By installing translators for ETV on commercial towers, ETV programs could be picked up and rebroadcast so that they can be received in areas which are beyond the reach of ETV stations. These translators would be maintained by the commercial stations.

IV. Provisions of ETV Construction Grant Bills

(1) $1 million per State versus formula distribution

The bills provide either that there shall be authorized to be appropriated $1 million per State or that grants in any State shall not exceed $1 million. Several witnesses commented that flat grants per State were not realistic and that funds appropriated should be distributed among the States on the basis of a formula taking into consideration all or some of such factors as area, population and per capita income. The witnesses pointed to the Hill-Burton formula and similar formulae which attempt to recognize different degrees of need among the States for Federal assistance.

(2) Outright grants versus matching grants

There was a substantial difference in the views expressed on the merits of outright grants as compared with matching grants. The proponents of outright grants argued that knowledge of the benefits to be derived from ETV had to come first and, therefore, State and local support for ETV operation would come about as a matter of course once an ETV station has come into existence with the aid of Federal grants.

Other witnesses favored outright grants for the reason that many States and local governments were unable financially or legally (debt ceilings) to provide matching grants and that matching grants available under the National Defense Education Act had to be turned down in many instances for these reasons. It was argued that if matching was required, those States and communities having poor educational facilities and therefore needing ETV most would be least likely to get it under a program requiring matching grants.

Other witnesses expressed the diametrically opposite view that local matching should be required (or State matching in the case of State operation) in order to make the community (or the State) face up to its financial responsibilities. Some witnesses suggested three-way matching in the case of local operations: one-half Federal, one-fourth State, and one-fourth local funds, or in the alternative: one-third Federal, one-third State, and one-third local funds.

Some witnesses suggested a compromise by requiring flexible matching on the basis of a formula taking into consideration the varying financial ability to match Federal funds.

All of the witnesses who preferred matching grants to outright grants advocated a provision giving full or partial credit for prior expenditures made for the construction of ETV stations. It was argued that ETV stations already in operation had demonstrated their financial responsibility and, therefore, should not be required to adduce additional proof by matching Federal grants which could be used to expand and improve the existing service.

(3) Who may qualify as a grantee

Witnesses favoring ETV operations by community nonprofit corporations expressed concern that under the provisions of H.R. 2926 (Roberts) and H.R. 3043 (Moulder) some of the present stations would not qualify for grants because the corporations operating these stations are not nonprofit foundations, corporations, or associations, organized and controlled by (*a*) an agency or officer responsible for the supervision of public education within that State, or within a

political subdivision thereof; or (*b*) a duly constituted State educational television agency; or (*c*) a college or university deriving its support in whole or in part from public revenues.

These witnesses favored the provisions contained in S. 12 and similar bills under which any nonprofit foundation, corporation, or association organized primarily to engage in or encourage educational television broadcasting may qualify for a Federal grant. The witnesses felt that existing nonprofit community organizations participated in by diverse groups interested in educational and civic affairs, had rendered vital ETV services and should not be disqualified from receiving Federal grants. Furthermore, they felt that such organizations were better qualified than either State agencies or local public-school systems to offer an effective and challenging ETV service, particularly in the afternoon and evening hours when mature adult education programs and discussion programs on public issues should be included in the broadcast schedules.

(*4*) *State screening agencies*

In each of the field hearings, the subcommittee sought the views of witnesses as to whether applicants for grants should be permitted to apply directly to the designated Federal agency or whether applications should be screened by a State agency and then forwarded to the Federal agency. While some witnesses appearing in the interest of stations operated by community nonprofit corporations expressed some apprehension over the powers which might be exercised by such State agency over ETV programing, the view was generally expressed that applications should be screened on the State level so that in case of competing applications within a State, a State agency rather than a Federal agency would determine priorities and limitations. This would be particularly desirable in case of competing applications from different communities within a State for closed circuit and open circuit ETV systems proposed to be used for different purposes.

Some witnesses went further, and urged that the grant legislation should require the establishment in the case of each State of an ETV commission, and that there should be placed on such commissions or boards, among others, representatives of higher and elementary education and prominent citizens interested in education, and that such boards or commissions should be given responsibility for planning ETV facilities in each State.

Representatives of several State departments of education urged that until the establishment of such commissions or boards, the responsibility for screening and planning should be left with the established State public education officials and agencies.

(*5*) *What facilities may be purchased with Federal grants?*

Several witnesses advocated clarification of the term "transmission apparatus" used in the bills so that that term would be understood to include microwave equipment, boosters, translators, repeaters, mobile equipment, and video-tape recording equipment since these items are indispensable to expanded and efficient ETV operations.

APPENDIX

JANUARY 7, 1960.

To: House Committee on Interstate and Foreign Commerce, Subcommittee on Educational Television.

Subject: Remarks of Vernon Bronson, assistant director of radio and television education, and manager of station WTHS–TV, at the hearing held in Miami on December 8, 1959.

I feel that it is extremely important that the Federal Government lend further assistance, including financial assistance, to the development of educational television facilities in the United States.

Our experiences here in Miami and in the other several dozen communities in the United States which have, through one effort or another, already developed their facilities for educational television, have proved beyond any doubt that good and even superior instruction in practically every subject area can be achieved through the use of television; that the abilities of good teachers can be shared by great masses of students which heretofore have been denied contact with such teachers; that present school facilities on all levels can be made to serve a great many more students by the use of television; that continuing education can be made a general reality at practically no cost through additional use of television facilities. Testimony of competent school administrators, such as Dr. Joe Hall, superintendent of schools in Miami, has indicated that not only can television do all these things which have been claimed for it, but that money can actually be saved in great amounts on both building construction and general school operations by such use of television.

While it is true that some 40 to 50 communities around the country have managed, in some measure, to develop the broadcast facilities on the channels allocated to them by the Federal Government, it is also true that some 200 of these channels are still unused and undeveloped. This is due to many reasons, but in most of the situations which I have examined the big factors which have deterred the development of educational television have been lack of local initiative, fear of a new medium with a seemingly large capital investment, a lack of general understanding of the potentials of the medium and general inertia due to a lack of local leadership. I have seen evidence time and time again that with some help on the initial capital investment from outside, local facilities could be built and used in such a way that the contribution to the community in dollars and cents, as well as in cultural and educational values, would overcome all these inhibiting factors. Only the Federal Government can prime this pump, but I want to state right here that I feel the pump priming and the protection of the reserve channels and the providing of necessary additional channels is the only responsibility of the Federal Government. The appropriations by the Congress for an initiatory capital equipment expenditure should be a "one shot" deal and should not in any way

create an obligation on the Congress for operational or other continuing funds.

As a matter of fact, my 10 years experience in the development and operation of educational television stations indicate that if the facilities are properly used within a community, there should be no reason for the Federal Government to participate operationally; that once launched and underway, educational television can carry itself by its service to the community and the schools of the community. The big point, of course, is that this launching is a thing which in most instances cannot and will not be done without the assistance of the Federal Government.

It seems to me that the proper way for the Federal Government to distribute such funds as it might appropriate would be through a State commission, and that the establishment of a State commission or State authority for educational television be one of the prerequisites to receiving a grant from the Federal Government for ETV development. Not only would this insure local control of the expenditures, but it would also create a statewide interest which would probably tend to a much greater degree of cooperative action. It seems to me that a Federal branch also should be based upon some sort of matching of funds, but that credit for such matching funds could and should be based upon moneys already expended locally in capital outlay. The pattern should be kept as simple as possible.

I hope this committee will recommend to the House at the coming session of Congress supporting legislation for educational television and that these facilities can be made available throughout the country to meet some of the great educational needs which we have and which are growing greater every day.

BOARD OF PUBLIC INSTRUCTION OF DADE COUNTY, FLA.,
Miami, Fla., January 7, 1960.

Mr. KURT BORCHARDT,
Legal Counsel, Committee on Interstate and Foreign Commerce, House Office Building, Washington, D.C.

DEAR MR. BORCHARDT: As requested, I am attempting to reduce to writing some of the statements which I made at the congressional committee hearing which was conducted here on December 8, 1959.

I stated that we had undertaken the educational television experiment for the purpose of trying to answer the following questions:

Question 1: Are there ways in which we can improve the quality of instruction through the use of educational television as a resource?

Question 2: Are there ways through the use of television that we can extend the influence of the good teacher?

Question 3: Are there parts of our school program which can be handled effectively in large groups, thus making it possible to have smaller groups in other aspects of the school program?

Question 4: Is it possible to conduct a quality educational program with a fewer number of teaching positions and thus make money available to pay better salaries for the positions which we must have?

Question 5: By using large groups in some of our classes, can we get greater use of buildings, thus reducing capital outlay costs?

Question 1

In the first year of our experiment we involved three elementary schools, three junior high schools, and three senior high schools. In the second year this number was increased to 10 elementary schools, 12 junior high schools, and 6 senior high schools. In the third year we increased the number to 15 elementary schools, 14 junior high schools, and 10 senior high schools.

Basically, the program called for a student to be in an auditorium in a group of 300 to 400 with a classroom teacher in charge of the group and another classroom teacher assisting the person in charge. These teachers were also given a special aid for clerical items. One-half of the 55-minute net period was the responsibility of the classroom teacher in charge. The other half of the period was utilized by a television presentation of the subject matter for the day. The television teacher had as a full assignment the presentation of this 28-minute telecast. No pupil had more than one class (one-sixth of his daily load) presented in this manner. Careful testing was conducted on the academic achievement at the beginning and at the end of the school year for the television groups and similar groups taking the courses in established patterns of 30 pupils to the class. Differences in achievement were not greatly significant, though they slightly favored the television groups. Detailed reports for the first 2 years of the experiment are available. Since this was the first time that we had utilized this method of providing instruction as contrasted with the long history of experience in teaching with established patterns and since achievement was somewhat superior for the television groups, it is felt that we have a method which will improve the quality of instruction provided.

Question 2

Since the television teacher is carefully selected as being a superior teacher and since this teacher has full time to devote to the preparation of one 28-minute television lesson each day, and since this teacher communicates with thousands rather than with one class of 30, it is felt that the influence of the good teacher is extended.

Question 3

Our program has involved 7th grade science, 8th grade history, 9th grade science, 9th grade civics, 10th grade English, 10th grade biology, 11th grade English, and 11th grade American history. The results obtained in each of these programs has been satisfactory. There may be other courses which can be taught in this manner with equal effectiveness. Some school systems have experienced favorable results with other subject matter. The handling of these larger groups has made it possible to provide other specialized personnel, such as special reading teachers who handle small groups without increasing the cost of the school-operating program.

Question 4

We have not explored this question fully. We have utilized the savings in teaching personnel to pay the full operating cost of the television station and the special television teachers. Additional savings in teaching personnel we have utilized, as indicated in question 3, to provide additional services in terms of special personnel to the schools in which the program is being conducted.

Question 5

By using the large groups, involved in the television program and the extended schoolday, we are able to accommodate 30 percent more pupils in a building than we can otherwise handle. It works in this manner. Approximately one-third of the pupils report to school at 7:30 a.m., another one-third at 8:30 a.m., and another one-third at 9:30 a.m. They leave school at 2:15, 3:15, and 4:15 p.m. This means that for four periods during the middle of the day, the entire group of students is present in the building. In this period, by utilizing our school auditoriums for the large groups, we are able to accommodate a much greater number of pupils within the same facility. With the program we now have involving only a limited number of our schools, we feel that we have saved at least $3 million in capital construction. To provide for the number of pupils in the established pattern for education that we now have in our buildings would require an immediate capital outlay program of at least $3 million. We believe as we involve other schools that the amount of capital savings will be increased far beyond this point.

The most frequently expressed criticism of the program which we have heard is that it destroys the personal relationship between pupil and teacher which may be obtained in a classroom of 30. Our answer to this is that for five periods during the day, or five-sixths of the pupil's time, we maintain the regular established pattern for classroom size. In addition, we feel there are certain other values derived from the large group situation. It requires the pupil to assume greater responsibility for his own conduct. It requires that the pupil pay strictest attention and make his notes as the presentation is made. We have also developed techniques for handling large groups and retaining many of the values which are derived from the small class size.

Additional comments: I did not comment on the work we are doing in the fifth and sixth grades because the explanation is somewhat complicated. Stated in overly brief terms, the schools are organized as follows: One-half of the children in the fifth and sixth grades are assigned in smaller than normal groups (25 or less) for one-half of the schoolday—approximately 2 hours 45 minutes net. These groups of pupils are assigned to teachers who have responsibility for the language arts—reading, writing, spelling, English, speaking, and arithmetic. The teacher handles one of these smaller than normal groups in the norning and another in the afternoon. For the other half of the schoolday the pupils are in larger groups. For 1½ hours they are in the cafetorium in groups of approximately 150. A specially trained teacher with a teacher aid is in charge of this group. Forty-five minutes of this time is utilized with instruction over television in history, geography, conversational Spanish, music, art, literature, etc. These subjects are scheduled so that the amount of time devoted to each is definitely determined. The other half of the 90-minute period is utilized by the teacher in charge of the large group in a variety of followup activities. Special training in the techniques of handling the large groups is given to the teacher in charge of the large classroom. For another 45-minute period approximately one-half of the pupils who are in the television class are assigned to a special projects room with an especially trained teacher in charge. Here further emphasis is given to science, music, art, etc., with specialized personnel coming

in as necessary. A third 45-minute period is devoted to training in health and physical education by a teacher qualified in this area. The results obtained in this program have been very satisfying. By handling the pupils in larger groups for one-half the day, we are able to place them in smaller groups for training in the fundamentals. We are, likewise, able to get greater utilization of building facilities.

Driver education: I did make some comments with respect to driver education. There are many statements in current literature regarding driver education, some feeling that it is not a school responsibility. State legislatures, however, seem to feel that it is essential that they provide designated funds for driver education and frequently make it compulsory. Insurance companies have also stimulated demand for driver education by giving more favorable rates to those who have had driver-training courses.

The basic pattern followed in many places is most expensive. Standard procedure is to obtain a driver-training car, assign a teacher to it, place four pupils in the car and rotate the person behind the wheel during a 1-hour period. This means that the instructor handles only 4 pupils in a given period, or a load of approximately 20 pupils during a day, as contrasted with the normal teacher load of 125 to 150 pupils during a given day. The teacher, likewise, handles the classroom-instruction portion of the program in groups of 30.

The standard driver-training course requires 6 hours of behind-the-wheel instruction and 30 hours of classroom instruction. We believe that we have developed a plan which will enable us to provide such instruction in an economical manner. Our plan works as follows: During the homeroom period of 15 minutes for 3 days each week for a semester of 18 weeks, direct teaching is provided to all 10th grade pupils in a given school. In many cases this number will exceed a thousand in a particular school. This provides for 12 of the 30 hours of classroom instruction. For the other 18 hours of classroom instruction, pupils are drawn from their physical education classes and given classroom instruction in smaller groups.

For the behind-the-wheel, 6-hour requirement, 10 to 15 cars are utilized with 2 pupils in each car. The area for training is set up in the general nature of an obstacle course on which there is no street traffic. The automobiles are provided with equipment which restricts their speed. The instructor is provided a loudspeaker and gives directions to the cars from a central location not in a car. The pupils in a period have a full half-hour behind the wheel. For the 12 periods necessary for this 6 hours of instruction, the pupils are drawn from physical-education classes.

By using this plan we are able to operate within the amount of money provided by the State with its special assessment of 25 cents an each driver's license for driver-training purposes. We are also able to provide all pupils, whose parents wish them to have special training, with instruction. The local automboile association has been most cooperative and has developed a plan whereby they provide new cars each year for $375 per car. This $375 is paid from the funds derived from drivers' license fees.

We do not give credit toward graduation for this driver-instruction course, but we can now make it available to all pupils without special charge other than for the drivers' license fees prescribed by law and without materially affecting the time devoted to other school work.

I hope this provides you with the information desired. If not, I shall be glad to attempt to answer any further questions with regard to our plan of operation.

Sincerely yours,

JOE HALL, *Superintendent.*

JANUARY 22, 1960.

Mr. JOE HALL,
Superintendent, Board of Public Instruction of Dade County, Fla., Miami, Fla.

DEAR MR. HALL: This is in further reference to your letter of January 7, 1960, summarizing some of the statements which you made at our subcommittee hearing on educational television.

Several members are particularly interested in having further information on the question of possible savings in school construction resulting from ETV.

In your letter under question 1, you stated that during the third year you increased the number of schools participating in the experiment to 15 elementary schools, 14 junior high schools, and 10 senior high schools. Under question 5 you state that with the present program involving only a limited number of schools you saved at least $3 million in capital construction. In the last sentence you further state: "We believe as we involve other schools that the amount of capital savings will be increased far beyond this point (of $3 million)."

Would it be possible to state with regard to the schools now involved in the experiment, what the percentage is of those schools in relation to the total number of schools in Dade County? Could the same information be supplied with regard to the percentage of the number of students now involved in the experiment in relation to the total number of students attending public schools in Dade County?

Then, on the basis of these percentage figures, would it be possible to make an approximate projection of future savings if the entire school system was included in the ETV program?

Perhaps I can demonstrate better what I have in mind by using an example. Assuming that the number of schools now participating in the experiment amounts to 33 percent of the schools in the school system, and that the number of students involved likewise amounts to 33 percent of the students enrolled in the school system. If $3 million were saved with 33 percent of the schools and students participating in the experiment, could it be said that you expect to save $9 million if all of the students and all of the schools participate in the experiment?

Anything you can do in supplying this further information will be greatly appreciated.

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With kindest regards.

Sincerely yours,

KURT BORCHARDT,
Legal Counsel.

BOARD OF PUBLIC INSTRUCTION
OF DADE COUNTY, FLA.,
Miami, Fla., January 28, 1960.

Mr. KURT BORCHARDT,
Legal Counsel, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.

DEAR MR. BORCHARDT: Thank you for your additional questions. They are very clear and specific. I wish I could be equally clear and specific in answering them.

Theoretically, the statements made as to percentage are correct. Actually, answers depend on a number of variables indicated by the following types of questions which must be answered.

1. Are there enough pupils in the area in which a school is located to justify the construction of a new school?
2. Could the needs for additional housing in this area be met by increasing the capacity of existing housing?
3. Is the area served by a school so large that costs of transporting pupils into the facility approximate the prorated cost of constructing an additional building?

Perhaps a study we have made in our school system for senior high schools in the next 3 to 5 years will illustrate the answer. If the figures are analyzed carefully, it will be seen that we will have in that period a need for three additional high school buildings costing approximately $2 million each. You will note that our final recommendation states that by utilizing the extended school day and educational television large class instruction during the overlapped periods, we feel we will not need to construct any additional senior high schools during that period. The savings in senior high schools, therefore, including present needs and those for the next 3 to 5 years, is $6million.

Some of the high schools listed are in areas where there is not a growing population. Consequently, it would not be accurate to state that a savings can be effected in those areas.

We have not made a similar detailed analysis of our junior high schools for the next 3 to 5 years. We do know, however, that if we were not utilizing the facilities in accordance with the plan sent to you in the previous letter, we would now need three additional junior high schools at an approximate cost of $1,200,000 each. We have a number of junior high schools which are not overloaded at the present time. Consequently, they would not be able to make any savings. Additional needs for junior high schools in the next few years will be met both by increasing the number of pupils in existing buildings and constructing new buildings.

In the elementary schools we are able to house in a school of 27 classrooms the number of pupils for whom 30 classrooms would ordinarily be provided.

We began our experiment without reference to housing. As additional schools are required in an area, we have increased the number of pupils housed in a given building by use of the television program, as explained in my previous communication.

The best way I can answer the questions which you raise is as follows: If one were starting a construction program in a newly established population area where no schools are in existence, then the

number of elementary classrooms needed could be reduced by 10 percent with the educational television program which we now operate. The number of junior high schools and the number of senior high school classrooms could be reduced by one-fourth.

In a practical situation, where school buildings already exist, the savings can be made only as the population increase in a particular area makes it possible and desirable. We do anticipate from our present rate of growth that the savings in capital construction over the next 5-year period will amount to about $12 million.

Sincerely yours,

JOE HALL, *Superintendent.*

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